

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Peter Lind, Linda S. Wood, Ronald
Hiebsch, Valerie Ruff, Eleni Lindberg, Luis
A. Parodi, Gabriel Vogeli

Serial No.: Not Yet Assigned

Group Art Unit: Not Yet Assigned

Filing Date: Herewith

Examiner: Not Yet Assigned

For: NOVEL G PROTEIN COUPLED RECEPTORS

BOX SEQUENCE

Assistant Commissioner for Patents
Washington DC 20231

**STATEMENT TO SUPPORT FILING AND SUBMISSION IN ACCORDANCE
WITH 37 CFR §§ 1.821 THROUGH 1.825**

I hereby state, in accordance with the requirements of 37 C.F.R. §1.821(f), that the contents of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 CFR §1.821(c) and (e), respectively are the same.

I hereby state that the submission filed in accordance with 37 CFR §1.821(g) does not include new matter.

I hereby state that the submission filed in accordance with 37 CFR §1.821(h) does not include new matter or go beyond the disclosure in the international application as filed.

I hereby state that the amendments, made in accordance with 37 CFR §1.825(a), included in the substitute sheet(s) of the Sequence Listing are supported in the application, as filed, at pages _____. I hereby state that the substitute sheet(s) of the Sequence Listing does (do) not include new matter.

I hereby state that the substitute copy of the computer readable form, submitted in accordance with 37 CFR §1.825(b), is the same as the amended Sequence Listing.

I hereby state that the substitute copy of the computer readable form, submitted in accordance with 37 CFR §1.825(d), contains identical data to that originally filed.

Date: 12/28/2000

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SEQUENCE LISTING

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 Hiebsch, Ronald
 Ruff, Valerie
 Lindberg, Eleni
 Parodi, Luis A.
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 100 105 110
 Gly Cys Arg Phe Ile Val Ala Glu Ile Gly Leu Gly Phe Gly Val Cys
 115 120 125
 Phe Leu Leu Val Gly Gly Ser Val Ala Met Gly Val Ile Cys Thr
 130 135 140
 Ala Ile Ala Leu Phe Gln Thr Leu Ala Val Gln Val Gly Arg Gln Ala
 145 150 155 160
 Asp Arg Arg Ala Phe Thr Val Pro Thr Ile Val Val Glu Asp Ala Gln
 165 170 175
 Gly Lys Arg Arg Ser Ser Ile Asp Gly Ser Glu Pro Ala Lys Thr Ser
 180 185 190
 Leu Gln Thr Thr Gly Leu Val Thr Thr Ile Val Phe Ile Tyr Asp Cys
 195 200 205
 Leu Met Gly Phe Pro Val Leu Val
 210 215

<210> 23
<211> 119
<212> PRT
<213> Homo sapiens

<400> 23

Met Ser Asp Glu Arg Arg Leu Pro Gly Ser Ala Val Gly Trp Leu Val
1 5 10 15

Cys Gly Gly Leu Ser Leu Leu Ala Asn Ala Trp Gly Ile Leu Ser Val
20 25 30

Gly Ala Lys Gln Lys Lys Trp Lys Pro Leu Glu Phe Leu Leu Cys Thr
35 40 45

Leu Ala Ala Thr His Met Leu Asn Val Ala Val Pro Ile Ala Thr Tyr
50 55 60

Ser Val Val Gln Leu Arg Arg Gln Arg Pro Asp Phe Glu Trp Asn Glu
65 70 75 80

Gly Leu Cys Lys Val Phe Val Ser Thr Phe Tyr Thr Leu Thr Leu Ala
85 90 95

Thr Cys Phe Ser Val Thr Ser Leu Ser Tyr His Arg Met Trp Met Val
100 105 110

Cys Trp Pro Val Asn Tyr Arg
115

<210> 24
<211> 330
<212> PRT
<213> Homo sapiens

<400> 24

Met Asp Pro Thr Thr Pro Ala Trp Gly Thr Glu Ser Thr Thr Val Asn
1 5 10 15

Gly Asn Asp Gln Ala Leu Leu Leu Cys Gly Lys Glu Thr Leu Ile
20 25 30

Pro Val Phe Leu Ile Leu Phe Ile Ala Leu Val Gly Leu Val Gly Asn
35 40 45

Gly Phe Val Leu Trp Leu Leu Gly Phe Arg Met Arg Arg Asn Ala Phe
50 55 60

Ser Val Tyr Val Leu Ser Leu Ala Gly Ala Asp Phe Leu Phe Leu Cys
65 70 75 80

Phe Gln Ile Ile Asn Cys Leu Val Tyr Leu Ser Asn Phe Phe Cys Ser
85 90 95

Ile Ser Ile Asn Phe Pro Ser Phe Phe Thr Thr Val Met Thr Cys Ala
100 105 110

Tyr Leu Ala Gly Leu Ser Met Leu Ser Thr Val Ser Thr Glu Arg Cys

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115	120	125
Leu Ser Val Leu Trp Pro Ile Trp Tyr Arg Cys Arg Arg Pro Arg His		
130	135	140
Leu Ser Ala Val Val Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Leu		
145	150	155
Ser Ile Leu Glu Gly Lys Phe Cys Gly Phe Leu Phe Ser Asp Gly Asp		
165	170	175
Ser Gly Trp Cys Gln Thr Phe Asp Phe Ile Thr Ala Ala Trp Leu Ile		
180	185	190
Phe Leu Phe Met Val Leu Cys Gly Ser Ser Leu Ala Leu Leu Val Arg		
195	200	205
Ile Leu Cys Gly Ser Arg Gly Leu Pro Leu Thr Arg Leu Tyr Leu Thr		
210	215	220
Ile Leu Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly		
225	230	235
Ile Gln Trp Phe Leu Ile Leu Trp Ile Trp Lys Asp Ser Asp Val Leu		
245	250	255
Phe Cys His Ile His Pro Val Ser Val Val Leu Ser Ser Leu Asn Ser		
260	265	270
Ser Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Lys Gln		
275	280	285
Trp Arg Leu Gln Gln Pro Ile Leu Lys Leu Ala Leu Gln Arg Ala Leu		
290	295	300
Gln Asp Ile Ala Glu Val Asp His Ser Glu Gly Cys Phe Arg Gln Gly		
305	310	315
Thr Pro Glu Met Ser Arg Ser Ser Leu Val		
325	330	
<210> 25		
<211> 371		
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<213> Homo sapiens		
<400> 25		
Met Pro Ala Asn Phe Thr Glu Gly Ser Phe Asp Ser Ser Gly Thr Gly		
1	5	10
15		
Gln Thr Leu Asp Ser Ser Pro Val Ala Cys Thr Glu Thr Val Thr Phe		
20	25	30
Thr Glu Val Val Glu Gly Lys Glu Trp Gly Ser Phe Tyr Tyr Ser Phe		
35	40	45
Lys Thr Glu Gln Leu Ile Thr Leu Trp Val Leu Phe Val Phe Thr Ile		
50	55	60
Val Gly Asn Ser Val Val Leu Phe Ser Thr Trp Arg Arg Lys Lys		

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65	70	75	80
Ser Arg Met Thr Phe Phe Val Thr Gln Leu Ala Ile Thr Asp Ser Phe			
85	90	95	
Thr Gly Leu Val Asn Ile Leu Thr Asp Ile Ile Trp Arg Phe Thr Gly			
100	105	110	
Asp Phe Thr Ala Pro Asp Leu Val Cys Arg Val Val Arg Tyr Leu Gln			
115	120	125	
Val Val Leu Leu Tyr Ala Ser Thr Tyr Val Leu Val Ser Leu Ser Ile			
130	135	140	
Asp Arg Tyr His Ala Ile Val Tyr Pro Met Lys Phe Leu Gln Gly Glu			
145	150	155	160
Lys Gln Ala Arg Val Leu Ile Val Ile Ala Trp Ser Leu Ser Phe Leu			
165	170	175	
Phe Ser Ile Pro Thr Leu Ile Ile Phe Gly Lys Arg Thr Leu Ser Asn			
180	185	190	
Gly Glu Val Gln Cys Trp Ala Leu Trp Pro Gly Asp Ser Tyr Trp Thr			
195	200	205	
Pro Tyr Met Thr Ile Val Ala Phe Leu Val Tyr Phe Ile Pro Leu Thr			
210	215	220	
Ile Ile Ser Ile Met Tyr Gly Ile Val Ile Arg Thr Ile Trp Ile Lys			
225	230	235	240
Ser Lys Thr Tyr Glu Thr Val Ile Ser Asn Cys Ser Asp Gly Lys Leu			
245	250	255	
Cys Ser Ser Tyr Asn Arg Gly Leu Ile Ser Lys Ala Lys Ile Lys Ala			
260	265	270	
Ile Lys Tyr Ser Ile Ile Ile Ile Leu Ala Phe Ile Cys Cys Trp Ser			
275	280	285	
Pro Tyr Phe Leu Phe Asp Ile Leu Asp Asn Phe Asn Leu Leu Pro Asp			
290	295	300	
Thr Gln Glu Arg Phe Tyr Ala Ser Val Ile Ile Gln Asn Leu Pro Ala			
305	310	315	320
Leu Asn Ser Ala Ile Asn Pro Pro Ile Tyr Cys Val Phe Ser Ser Ser			
325	330	335	
Ile Ser Phe Pro Cys Arg Glu Gln Arg Ser Gln Asp Ser Arg Met Thr			
340	345	350	
Phe Arg Glu Arg Thr Glu Arg His Glu Met Gln Ile Leu Ser Lys Pro			
355	360	365	
Glu Phe Ile			
370			
<210> 26			
<211> 393			

<212> . PRT
<213> Homo sapiens

<400> 26

Met Glu Thr Thr Met Gly Phe Met Asp Asp Asn Ala Thr Asn Thr Ser
1 5 10 15

Thr Ser Phe Leu Ser Val Leu Asn Pro His Gly Ala His Ala Thr Ser
20 25 30

Phe Pro Phe Asn Phe Ser Tyr Ser Asp Tyr Asp Met Pro Leu Asp Glu
35 40 45

Asp Glu Asp Val Thr Asn Ser Arg Thr Phe Phe Ala Ala Lys Ile Val
50 55 60

Ile Gly Met Ala Leu Val Gly Ile Met Leu Val Cys Gly Ile Gly Asn
65 70 75 80

Phe Ile Phe Ile Ala Ala Leu Val Arg Tyr Lys Lys Leu Arg Asn Leu
85 90 95

Thr Asn Leu Ile Ala Asn Leu Ala Ile Ser Asp Phe Leu Val Ala
100 105 110

Ile Val Cys Cys Pro Phe Glu Met Asp Tyr Tyr Val Val Arg Gln Leu
115 120 125

Ser Trp Glu His Gly His Val Leu Cys Thr Ser Val Asn Tyr Leu Arg
130 135 140

Thr Val Ser Leu Tyr Val Ser Thr Asn Ala Leu Leu Ala Ile Ala Ile
145 150 155 160

Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Pro Arg Met Lys Cys
165 170 175

Gln Thr Ala Thr Gly Leu Ile Ala Leu Val Trp Thr Val Ser Ile Leu
180 185 190

Ile Ala Ile Pro Ser Ala Tyr Phe Thr Thr Glu Thr Val Leu Val Ile
195 200 205

Val Lys Ser Gln Glu Lys Ile Phe Cys Gly Gln Ile Trp Pro Val Asp
210 215 220

Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe Leu Phe Ile Phe Gly Ile Glu
225 230 235 240

Phe Val Gly Pro Val Val Thr Met Thr Leu Cys Tyr Ala Arg Ile Ser
245 250 255

Arg Glu Leu Trp Phe Lys Ala Val Pro Gly Phe Gln Thr Glu Gln Ile
260 265 270

Arg Lys Arg Leu Arg Cys Arg Arg Lys Thr Val Leu Val Leu Met Cys
275 280 285

Ile Leu Thr Ala Tyr Val Leu Cys Trp Ala Pro Phe Tyr Gly Phe Thr
290 295 300

Ile Val Arg Asp Phe Phe Pro Thr Val Phe Val Lys Glu Lys His Tyr
305 310 315 320

Leu Thr Ala Phe Tyr Ile Val Glu Cys Ile Ala Met Ser Asn Ser Met
325 330 335

Ile Asn Thr Leu Cys Phe Val Thr Val Lys Asn Asp Thr Val Lys Tyr
340 345 350

Phe Lys Lys Ile Met Leu Leu His Trp Lys Ala Ser Tyr Asn Gly Gly
355 360 365

Lys Ser Ser Ala Asp Leu Asp Leu Lys Thr Ile Gly Met Pro Ala Thr
370 375 380

Glu Glu Val Asp Cys Ile Arg Leu Lys
385 390

<210> 27

<211> 389

<212> PRT

<213> Homo sapiens

<400> 27

Met Gly Phe Met Asp Asp Asn Ala Thr Asn Thr Ser Thr Ser Phe Leu
1 5 10 15

Ser Val Leu Asn Pro His Gly Ala His Ala Thr Ser Phe Pro Phe Asn
20 25 30

Phe Ser Tyr Ser Asp Tyr Asp Met Pro Leu Asp Glu Asp Glu Asp Val
35 40 45

Thr Asn Ser Arg Thr Phe Phe Ala Ala Lys Ile Val Ile Gly Met Ala
50 55 60

Leu Val Gly Ile Met Leu Val Cys Gly Ile Gly Asn Phe Ile Phe Ile
65 70 75 80

Ala Ala Leu Val Arg Tyr Lys Lys Leu Arg Asn Leu Thr Asn Leu Leu
85 90 95

Ile Ala Asn Leu Ala Ile Ser Asp Phe Leu Val Ala Ile Val Cys Cys
100 105 110

Pro Phe Glu Met Asp Tyr Tyr Val Val Arg Gln Leu Ser Trp Glu His
115 120 125

Gly His Val Leu Cys Thr Ser Val Asn Tyr Leu Arg Thr Val Ser Leu
130 135 140

Tyr Val Ser Thr Asn Ala Leu Ala Ile Ala Ile Asp Arg Tyr Leu
145 150 155 160

Ala Ile Val His Pro Leu Arg Pro Arg Met Lys Cys Gln Thr Ala Thr
165 170 175

Gly Leu Ile Ala Leu Val Trp Thr Val Ser Ile Leu Ile Ala Ile Pro
180 185 190

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Ser Ala Tyr Phe Thr Thr Glu Thr Val Leu Val Ile Val Lys Ser Gln
 195 200 205
 Glu Lys Ile Phe Cys Gly Gln Ile Trp Pro Val Asp Gln Gln Leu Tyr
 210 215 220
 Tyr Lys Ser Tyr Phe Leu Phe Ile Phe Gly Ile Glu Phe Val Gly Pro
 225 230 235 240
 Val Val Thr Met Thr Leu Cys Tyr Ala Arg Ile Ser Arg Glu Leu Trp
 245 250 255
 Phe Lys Ala Val Pro Gly Phe Gln Thr Glu Gln Ile Arg Lys Arg Leu
 260 265 270
 Arg Cys Arg Arg Lys Thr Val Leu Val Leu Met Cys Ile Leu Thr Ala
 275 280 285
 Tyr Val Leu Cys Trp Ala Pro Phe Tyr Gly Phe Thr Ile Val Arg Asp
 290 295 300
 Phe Phe Pro Thr Val Phe Val Lys Glu Lys His Tyr Leu Thr Ala Phe
 305 310 315 320
 Tyr Ile Val Glu Cys Ile Ala Met Ser Asn Ser Met Ile Asn Thr Leu
 325 330 335
 Cys Phe Val Thr Val Lys Asn Asp Thr Val Lys Tyr Phe Lys Lys Ile
 340 345 350
 Met Leu Leu His Trp Lys Ala Ser Tyr Asn Gly Gly Lys Ser Ser Ala
 355 360 365
 Asp Leu Asp Leu Lys Thr Ile Gly Met Pro Ala Thr Glu Glu Val Asp
 370 375 380
 Cys Ile Arg Leu Lys
 385
 <210> 28
 <211> 9
 <212> PRT
 <213> Synthetic Substrate
 <400> 28
 Ala Pro Arg Thr Pro Gly Gly Arg Arg
 1 5
 <210> 29
 <211> 27
 <212> DNA
 <213> Artificial
 <220>
 <223> Novel Sequence
 <400> 29
 ttcaaagctt atggatccaa ccaccc

<210> 30	
<211> 32	
<212> DNA	
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<220>	
<223> Novel Sequence	
<400> 30	32
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<210> 31	
<211> 19	
<212> DNA	
<213> Artificial	
<220>	
<223> Novel Sequence	
<400> 31	19
taggcacagg tcatcacag	
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<223> Novel Sequence	
<400> 32	18
ttggacgcca ggaaggta	
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<211> 26	
<212> DNA	
<213> Artificial	
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<223> Novel Sequence	
<400> 33	26
gcctggagcc tgtctttct gttctc	
<210> 34	
<211> 28	
<212> DNA	
<213> Artificial	
<220>	
<223> Novel Sequence	
<400> 34	28
gtagatgagg gggttgatgg cactattc	

<210> 35		
<211> 28		
<212> DNA		
<213> Artificial		
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<223> Novel Sequence		
<400> 35	28	
cctgatcata tttggaaaga ggacactg		
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<211> 28		
<212> DNA		
<213> Artificial		
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<223> Novel Sequence		
<400> 36	28	
gatacgcttg attttgctt ttgagatg		
<210> 37		
<211> 30		
<212> DNA		
<213> Artificial		
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<223> Novel Sequence		
<400> 37	30	
gcagcagacata atggccacca ggaagtcaga		
<210> 38		
<211> 30		
<212> DNA		
<213> Artificial		
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<223> Novel Sequence		
<400> 38	30	
tgagcaggtt ggtgaggttgcgcagttct		
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<210> 41	
<211> 1612	
<212> DNA	
<213> Homo sapiens	
<400> 41	
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ccaaaaaaaaa aaggccattc tgaggatcaa ggcaccacta gcaacaggga gccccatggg	120
tctcagaccc tctccccaca tctcctgtc cctgccccca cctggcgtac agggaccage	180
cccacggaaag gctcttgagg ccaggttaacc atggggaggg gaggaatggg gacacccccc	240
tctctgagtgt cttagggaaag agaagcttag gtcaggtggc tgagggtgga aatgagagag	300
gggtctctc ctggagggtc tcaccatcc cttggtcacc cacccaaactc tcatactcccc	360
tgatgtgggg aggagcaggg ggcattggatt cctgagcccc agactcaact gttgtgggtt	420
acaggggcat caggagagag agcgagcaga acacactcct gcagcatcccc ctggcccccc	480
gccccatgtat ggagccccaga gaagctggac agcacgtggg ggccggccaaac ggcccagg	540
aggatgtggc cttaaacctc atcatectgt ccctcaccga gggctcgcc ctcgggtggc	600
tgctggggaa tggggcagtc ctctggctgc tcagctccaa tgtctacaga aacccttcg	660
ccatctacct cctggacgtg gcctgcgcgg atctcatctt ccttggctgc cacatggtg	720
ccatctgtccc cgacttgtc caaggccggc tggacttccc gggcttcgtg cagaccagcc	780
tggcaacgtg ggccttc tgcatacgtc tggcctgtg tctctggcg gccgtcagcg	840
tggagcagtg cttggccggc ctcttccag cttggtaactc gtgcggccgc ccacgcccacc	900
tgaccacctg tggcgtgcgc ctcaccctggg ccctctgcct gtcgtgcac ctgtgtctca	960
ggggcgctg caccctgttc ttccggggagc ccacccggca cttgtggccgg acgctgtggc	1020
tggcgtgcagc ggtgtgtctg gctctgtgt gttgcacccat gttgtggggcc agccttatgc	1080
tgtgtgtcg ggtggagcga ggccccccagc ggccccccacc cccgggtctc cttggctca	1140
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cccgaaacct gctctggtaa atcccccaact acttctacca cttcagcttc tcataggccg	1260
ccgtgcactg cgccggccaaag cccgtcgct acttctgtct gggcgtgcg caggccgca	1320

ggctgcccct ccggctggtc ctccagcag cgctggaga cgaggctgag ctggggccg 1380
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 ctggggccag ccggacactgg aggaggcctt ggtgggtgac ccggtcatgt gctgtcaaag 1560
 ttgtgaccct tggctctggag catgaggcctc ccctgggagg cagctggaaa gg 1612

<210> 42
 <211> 530
 <212> PRT
 <213> Homo sapiens

<400> 42

Val Ser Arg Asp Gly Ala Ile Ala Leu Pro Gly Ala Thr Glu Pro Asp
 1 5 10 15

Ser Ile Ser Lys Lys Lys Arg Pro Phe Gly Ser Arg His His Gln Gln
 20 25 30

Gly Ala Pro Trp Val Ser Asp Pro Leu Pro Thr Ser Pro Gly Pro Cys
 35 40 45

Pro His Leu Ala Tyr Arg Asp Gln Pro His Gly Arg Leu Leu Arg Pro
 50 55 60

Gly Asn His Gly Glu Gly Arg Asn Gly Asp Thr Phe Leu Leu Ser Val
 65 70 75 80

Leu Gly Lys Arg Ser Leu Gly Gln Val Ala Glu Gly Gly Asn Glu Arg
 85 90 95

Gly Val Ser Ser Trp Arg Val Ser Pro Phe Pro Trp Ser Pro Thr Gln
 100 105 110

Leu Ser Ser Pro Leu Met Trp Gly Gly Ala Gly Gly Met Asp Ser Ala
 115 120 125

Pro Asp Ser Thr Val Val Tyr Arg Gly Ile Arg Arg Glu Ser Glu
 130 135 140

Gln Asn Thr Leu Leu Gln His Pro Leu Ala Pro Arg Pro Met Met Glu
 145 150 155 160

Pro Arg Glu Ala Gly Gln His Val Gly Ala Ala Asn Gly Ala Gln Glu
 165 170 175

Asp Val Ala Phe Asn Leu Ile Ile Leu Ser Leu Thr Glu Gly Leu Gly
 180 185 190

Leu Gly Gly Leu Leu Gly Asn Gly Ala Val Leu Trp Leu Leu Ser Ser
 195 200 205

Asn Val Tyr Arg Asn Pro Phe Ala Ile Tyr Leu Leu Asp Val Ala Cys
 210 215 220

Ala Asp Leu Ile Phe Leu Gly Cys His Met Val Ala Ile Val Pro Asp

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225	230	235	240
Leu Leu Gln Gly Arg Leu Asp Phe Pro Gly Phe Val Gln Thr Ser Leu			
245	250	255	
Ala Thr Leu Arg Phe Cys Tyr Ile Val Gly Leu Ser Leu Leu Ala Ala			
260	265	270	
Val Ser Val Glu Gln Cys Leu Ala Ala Leu Phe Pro Ala Trp Tyr Ser			
275	280	285	
Cys Arg Arg Pro Arg His Leu Thr Thr Cys Val Cys Ala Leu Thr Trp			
290	295	300	
Ala Leu Cys Leu Leu His Leu Leu Leu Ser Gly Ala Cys Thr Gln			
305	310	315	320
Phe Phe Gly Glu Pro Ser Arg His Leu Cys Arg Thr Leu Trp Leu Val			
325	330	335	
Ala Ala Val Leu Leu Ala Leu Leu Cys Cys Thr Met Cys Gly Ala Ser			
340	345	350	
Leu Met Leu Leu Leu Arg Val Glu Arg Gly Pro Gln Arg Pro Pro Pro			
355	360	365	
Arg Gly Phe Pro Gly Leu Ile Leu Leu Thr Val Leu Leu Phe Leu Phe			
370	375	380	
Cys Gly Leu Pro Phe Gly Ile Tyr Trp Leu Ser Arg Asn Leu Leu Trp			
385	390	395	400
Tyr Ile Pro His Tyr Phe Tyr His Phe Ser Phe Leu Met Ala Ala Val			
405	410	415	
His Cys Ala Ala Lys Pro Val Val Tyr Phe Cys Leu Gly Ser Ala Gln			
420	425	430	
Gly Arg Arg Leu Pro Leu Arg Leu Val Leu Gln Arg Ala Leu Gly Asp			
435	440	445	
Glu Ala Glu Leu Gly Ala Val Arg Glu Thr Ser Arg Arg Gly Leu Val			
450	455	460	
Asp Ile Ala Ala Ala Leu Gly Pro Pro Thr Pro Ala Ala Ala Pro Val			
465	470	475	480
Arg Gln Glu Gly Asp Val Gly Lys Val Val Gly Ser Glu Ala Gly Ala			
485	490	495	
Ser Arg Thr Trp Arg Arg Pro Trp Trp Val Thr Arg Ser Cys Ala Val			
500	505	510	
Lys Val Val Thr Leu Gly Leu Glu His Glu Ala Pro Leu Gly Gly Ser			
515	520	525	
Trp Lys			
530			
<210> 43			
<211> 1612			

<212> DNA
<213> Homo sapiens

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ccaaaaaaaaa aaggccattc tgaggatcaa ggcaccacta gcaacaggga gccccatggg		120
tctcagaccc tctcccaacca tctcctggc ectggcccca cctggcgtac agggaccagc		180
cccacggaaag gctcttgagg ccaggttaacc atggggaggg gaggaaatggg gacacccctcc		240
tcctgagtgt cttaggaaag agaagcttag gtcaggtggc tgagggtgga aatgagagag		300
gggtctccctc ctggagggtc tcaccatttc ctgggtcacc cacccaaactc tcatctcccc		360
tgatgtgggg aggagcaggg ggcatggatt cctgagccccc agactcaact gttgtggttt		420
acaggggcat caggagagag agcgagcaga acacactctt gcagcatccc ctggccccc		480
gccccatgat ggagcccaga gaagctggac agcacgtggg ggccgcacac ggcccccagg		540
aggatgtggc cttcaaccctc atcatctgt ccctcaccga ggggctcgcc ctcgggtggcc		600
tgctggggaa tggggcagtc ctctggctgc tcagctccaa tgtctacaga aacccttcg		660
ccatctaccc cctggacgtg gcctgcgcgg atctcatctt cttggctgc cacatggtg		720
ccatcgccccc cgacttgcgtg caaggccgcg tggacttccc gggcttcgtg cagaccaggc		780
tggcaacgtc ggcgttcttc tgctacatcg tgggcctgag tctcctggc gccgtcagcg		840
tggagcagtg cctggccccc ctcttccctc cctggacttc gtgcgcgcgc ccacgcacc		900
tgaccaccc tttgtgcggcc ctacacctggg ccctctgcgt gtcgtgcac etgtgtgtca		960
gggggcctcg caccctgttc ttccggggagc ccaggcccca ctgtgcggc acgtgtggc		1020
tgggtggcagc ggtgtgtctg gtcgtgtgt gtgtgcacat gtgtggggcc agccttatgc		1080
tgctgtgtcg ggtggaggcg gggcccccaccc ggccggcttc cttgggtctca		1140
tcctcctcact cgtcttcctc ttcccttttgc gggcctggcc ctggcgtatc tactggctgt		1200
cccgaaacct gtcgtgtac atccccccact attcttacca cttcagtttc ctcatggcc		1260
ccgtgcactg cgccggccaaag cccgtcgctt acttctgtct gggcgtgtcc caggccgc		1320
ggcgtccctt ccggcgtggc ctccagcgag cgctgggaga cgaggctgag ctggggcc		1380
tcaggaggagc ctccccccgg ggcctgggtt acatagcagc ctgacgcctg gggccccc		1440
ccccagctgc agccccctg aggcaagagg gtgacgtggg gaagggtggg ggttcagagg		1500
ctggggccag ccggacttgg aggaggcctt ggtgggtgac ccggcatgt gtcgtcaaag		1560
ttgtgaccct tggcttgag catgaggctc ccctggagg cagctggaaa gg		1612

<210> 44
<211> 311

<212> PRT
<213> *Homo sapiens*

<400> 44

Met	Met	Glu	Pro	Arg	Glu	Ala	Gly	Gln	His	Val	Gly	Ala	Ala	Asn	Gly
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Ala	Gln	Glu	Asp	Val	Ala	Phe	Asn	Leu	Ile	Ile	Leu	Ser	Leu	Thr	Glu
					20					25					30
Gly	Leu	Gly	Leu	Gly	Gly	Leu	Leu	Gly	Asn	Gly	Ala	Val	Leu	Trp	Leu
					35					40					45
Leu	Ser	Ser	Asn	Val	Tyr	Arg	Asn	Pro	Phe	Ala	Ile	Tyr	Leu	Leu	Asp
					50					55					60
Val	Ala	Cys	Ala	Asp	Leu	Ile	Phe	Leu	Gly	Cys	His	Met	Val	Ala	Ile
					65					75					80
Val	Pro	Asp	Leu	Leu	Gln	Gly	Arg	Leu	Asp	Phe	Pro	Gly	Phe	Val	Gln
					85					90					95
Thr	Ser	Leu	Ala	Thr	Leu	Arg	Phe	Cys	Tyr	Ile	Val	Gly	Leu	Ser	Leu
					100					105					110
Leu	Ala	Ala	Val	Ser	Val	Glu	Gln	Cys	Leu	Ala	Ala	Leu	Phe	Pro	Ala
					115					120					125
Trp	Tyr	Ser	Cys	Arg	Arg	Pro	Arg	His	Leu	Thr	Thr	Cys	Val	Cys	Ala
					130					135					140
Leu	Thr	Trp	Ala	Leu	Cys	Leu	Leu	Leu	His	Leu	Leu	Leu	Ser	Gly	Ala
					145					150					160
Cys	Thr	Gln	Phe	Phe	Gly	Glu	Pro	Ser	Arg	His	Leu	Cys	Arg	Thr	Leu
					165					170					175
Trp	Leu	Val	Ala	Ala	Val	Leu	Leu	Ala	Leu	Leu	Cys	Cys	Thr	Met	Cys
					180					185					190
Gly	Ala	Ser	Leu	Met	Leu	Leu	Leu	Arg	Val	Glu	Arg	Gly	Pro	Gln	Arg
					195					200					205
Pro	Pro	Pro	Arg	Gly	Phe	Pro	Gly	Leu	Ile	Leu	Leu	Thr	Val	Leu	Leu
					210					215					220
Phe	Leu	Phe	Cys	Gly	Leu	Pro	Phe	Gly	Ile	Tyr	Trp	Leu	Ser	Arg	Asp
					225					230					240
Leu	Leu	Trp	Tyr	Ile	Pro	His	Tyr	Phe	Tyr	His	Phe	Ser	Phe	Leu	Met
					245					250					255
Ala	Ala	Val	His	Cys	Ala	Ala	Lys	Pro	Val	Val	Tyr	Phe	Cys	Leu	Gly
					260					265					270
Ser	Ala	Gln	Gly	Arg	Arg	Leu	Pro	Leu	Arg	Leu	Val	Gln	Arg	Ala	
					275					280					285
Leu	Gly	Asp	Glu	Ala	Glu	Leu	Gly	Ala	Val	Arg	Glu	Thr	Ser	Arg	Arg
					290					295					300

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305 310

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20 25 30

Gly Leu Gly Leu Gly Gly Leu Leu Gly Asn Gly Ala Val Leu Trp Leu
35 40 45

Leu Ser Ser Asn Val Tyr Arg Asn Pro Phe Ala Ile Tyr Leu Leu Asp
 50 55 60

Val Ala Cys Ala Asp Leu Ile Phe Leu Gly Cys His Met Val Ala Ile
 65 70 75 80
 Val Pro Asp Leu Leu Gln Gly Arg Leu Asp Phe Pro Gly Phe Val Gln
 85 90 95
 Thr Ser Leu Ala Thr Leu Arg Phe Cys Tyr Ile Val Gly Leu Ser Leu
 100 105 110
 Leu Ala Ala Val Ser Val Glu Gln Cys Leu Ala Ala Leu Phe Pro Ala
 115 120 125
 Trp Tyr Ser Cys Arg Arg Pro Arg His Leu Thr Thr Cys Val Cys Ala
 130 135 140
 Leu Thr Trp Ala Leu Cys Leu Leu Leu His Leu Leu Leu Ser Gly Ala
 145 150 155 160
 Cys Thr Gln Phe Phe Gly Glu Pro Ser Arg His Leu Cys Arg Thr Leu
 165 170 175
 Trp Leu Val Ala Ala Val Leu Leu Ala Leu Leu Cys Cys Thr Met Cys
 180 185 190
 Gly Ala Ser Leu Met Leu Leu Leu Arg Val Glu Arg Gly Pro Gln Arg
 195 200 205
 Pro Pro Pro Arg Gly Phe Pro Gly Leu Ile Leu Leu Thr Val Leu Leu
 210 215 220
 Phe Leu Phe Cys Gly Leu Pro Phe Gly Ile Tyr Trp Leu Ser Arg Asn
 225 230 235 240
 Leu Leu Trp Tyr Ile Pro His Tyr Phe Tyr His Phe Ser Phe Leu Met
 245 250 255
 Ala Ala Val His Cys Ala Ala Lys Pro Val Val Tyr Phe Cys Leu Gly
 260 265 270
 Ser Ala Gln Gly Arg Arg Leu Pro Leu Arg Leu Val Leu Gln Arg Ala
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